

# NAVAL AVIATION

THE ROYAL CANADIAN NAVY is primarily an anti-submarine force; one of its main tasks is to locate, track and destroy enemy submarines. This is done by surface vessels and carrier-borne aircraft working together as a team.

The role of aviation in today's modern navy is the subject of this monograph.

## HISTORY AND IMPORTANCE

In November, 1945, three officers and six men of the Royal Canadian Navy were posted to an RCAF station near Halifax and provided with a collection of vintage Walrus and Swordfish aircraft. In the years since, naval aviation in Canada has grown to a highly specialized force of over 2,000 officers and men and more than 70 aircraft.

Although naval aviation in Canada officially came into being in 1945, it can be traced back to the closing year of the First World War, when the Royal Canadian Naval Air Service was formed on the east coast to carry out anti-submarine operations. Plans were drawn up to expand the Canadian naval air service, but the end of the war brought the first stirrings of an RCN air arm to a stop.

During the Second World War the successes achieved by combinations of carrier-borne aircraft and surface ships against submarines led to recognition of the need for the Royal Canadian Navy to have an air capability. In 1943, the feasibility of forming a Canadian naval air service was investigated. As a result, two Royal Navy escort carriers, HMS Nabob and HMS Puncher, were manned by Canadian

officers and men. The Royal Navy's Fleet Air Arm provided aircraft and crews, although among the latter were a number of Canadians. The operations of these ships provided Canada with valuable naval air experience.

After the war, Canadian naval aviation got into full swing. In January, 1946, Canada's first aircraft carrier was borrowed from Britain and commissioned into the fleet as HMCS Warrior.

Carrying Seafire and Firefly aircraft, the Warrior played an active and important part in moulding the newly-formed air arm.

In March, 1948, the Warrior was returned to Britain in exchange for her more modern sister, HMCS Magnificent. The "Maggie", as she was quickly nicknamed, served for eight busy years. In 1948, the RCAF Station near Halifax, N.S., was turned over to the navy and became the first Canadian naval air station, HMCS Shearwater.

Since 1957, naval aviation in this country has centered around Canada's third aircraft carrier, HMCS Bonaventure. This 20,000-ton carrier, the first to be owned outright by Canada, is equipped with an angled flight deck, mirror landing aid and steam catapult. From the Bonaventure's flight deck fly twin-engined CS2F Tracker anti-submarine aircraft, CHSS-2 Sea King and HO4S3 anti-submarine helicopters, the latter now being phased out of use as the new Sea King helicopters come into service. In the past, F2H3 Banshee jet fighters also operated from the Bonaventure, but these aircraft are no longer used by the RCN.



## HMCS SHEARWATER

The Navy's air station near Halifax, HMCS Shearwater, has been the hub of naval air activity since 1948. Shearwater now occupies 1,300 acres of land, making it the largest naval establishment in Canada. The station has a dual function: training and operational flying. A fleet school, established in 1960, co-ordinates all phases of air and ground training.

Based at Shearwater are five squadrons of fixed-wing aircraft and helicopters. These include the RCN's two front line anti-submarine squadrons, VS-880 and HS-50, flying Trackers and helicopters respectively. Both squadrons are frequently embarked in the Bonaventure. Also based at Shearwater are VU-32, a fixed wing utility squadron which operates Trackers and T-33 jets for aircrew training and fleet support; HU-21, a helicopter utility squadron which trains helicopter pilots and other aircrewmen, and carries out fleet support and search and rescue duties.

The fifth squadron based at Shearwater is VX 10, the navy's experimental squadron, which is engaged in the testing and evaluation of aircraft and equipment.

The RCN's sixth air squadron is based 3,000 miles west of Shearwater, at Patricia Bay airport, 20 miles north of Victoria, British Columbia. Here naval pilots carry out a variety of fleet support duties and aircrew training. The squadron is also a key link in the search and rescue organization on the Pacific coast.

## NEW DEVELOPMENTS

The new turbo-powered all-weather helicopter, the CHSS-2 Sea King, has been selected to replace the Sikorsky HO4S3. Delivery of the first machine took place in May, 1963. With a crew of two pilots and two aircrewmen, the Sea King, in its anti-submarine role, will operate from HMCS Bonaventure and from Canada's postwar destroyer escorts, which are being equipped with a hangar for one helicopter and a small landing platform.

## OFFICERS AND MEN

Today, 300 RCN officers wear aircrew wings. Of this number, about 225 are engaged in flying duties with the six naval air squadrons, and the remainder are serving at sea and ashore in a variety of naval appointments. Several destroyer escorts are commanded by naval aviators.

Naval aviation requires more than up-to-date aircraft and highly-trained pilots. Also needed are graduates in aeronautical and electrical engineering; and enlisted men and non commissioned officers without whom this specialized field could not exist. In addition to the pilots, there are in the RCN about 1,700 air riggers, air fitters, naval airmen, naval aircrewmen, air weaponmen and aviation technicians.

Naval aviation requires high professional standards of its officers and men. The operation of twin-engined aircraft from the comparatively small deck of an aircraft carrier demands the constant alertness of each and every man of the naval aviation team.

Canadian naval aviation enjoys a high performance record, and this can be directly attributed to the sense of responsibility felt by all of those who serve in this field of naval activity.

In spite of rapid technical developments and the consequent shifts of emphasis in tactics and equipment, Canadian naval aviation is well prepared to meet the challenges of the future.

## HOW TO GET STARTED TOWARD THE OCCUPATION

**Officers:** There are two avenues of entry into the naval aviation field. Young men who are interested in becoming pilots may apply for entry into the tri-service Regular Officer Training Plan, or the RCN Short Service Officer Plan.

The ROTP provides a university education to the degree level for young men with at least junior matriculation standing. Selected candidates attend either a university or one of the three Canadian Services Colleges; Royal Military College of Canada, Royal Roads, or le Collège Militaire Royal de Saint-Jean.

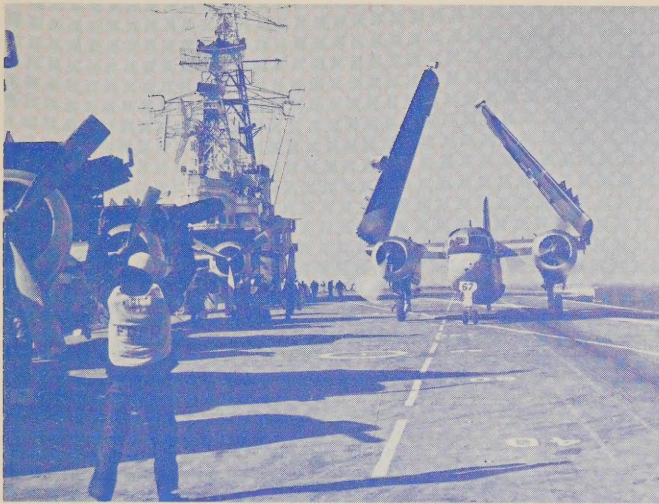
The RCN Short Service Officer Plan is open to young men with at least junior matriculation standing. Selected candidates serve for seven years, and in addition to their aviation training and service, receive instruction in a number of academic subjects.

**Men:** There is no direct entry into the naval aviation field for enlisted men.

They enter the Royal Canadian Navy under the general entry system, training first as seamen. During basic naval training, men are selected for one of the 24 naval trades. Preferences for a particular trade are taken into consideration, and if it is found that he has an aptitude for the naval aviation field, a man may be selected for training as an air fitter, air rigger, naval airman or weaponman air. After three years of training and experience in these fields, men may be selected for training and employment as aviation technicians, naval aircrewmen, air electrical technicians and air electronic technicians.







## HMCS BONAVENTURE

*(Aircraft Carrier)*

HMCS Bonaventure is an ASW (Anti-Submarine Warfare) carrier and is the first ship in the RCN to bear that name. She is named after Bonaventure Island in the Gulf of St. Lawrence. The island is famous as a bird sanctuary and sea birds of many kinds make it their nesting place.

The Bonaventure was built at the shipyard of Harland & Wolff Ltd., Belfast, Northern Ireland, and was commissioned there in January, 1957.

Since joining the fleet the Bonaventure has represented Canada in numerous NATO and other major naval exercises. In addition the carrier took part in the dramatic rescue of passengers of an airliner forced down in mid-Atlantic in 1962, and in 1964, the Bonaventure carried Canadian troops, heavy equipment and stores to Cyprus, in support of the United Nations peacekeeping force being established on the island.

Machinery:	Parsons single-reduction geared turbines. 2 shafts S.H.P.: 40,000.
Speed:	25 Kts.
Complement:	1,200 officers and men.
Armament:	Four twin 3-inch, 50-calibre guns.
Aircraft:	CS2F Tracker anti-submarine aircraft; and Sikorsky anti-submarine helicopters.
Displacement:	16,000 tons standard (20,000 tons full load).
Dimensions:	Length: 704 feet. Beam: hull 80 feet; flight deck 112½ feet.
Draught:	25 feet.



## THE CANADIAN CS2F-2 "TRACKER"

*(Anti-Submarine Aircraft)*

The CS2F-2 Tracker was built in Canada by de Havilland Aircraft of Canada Limited, Downsview, Ont., under license from the Grumman Aircraft Engineering Corporation of the United States. An all-weather, twin-engine aircraft, it is literally packed with electronic devices for navigation, and for the detection of submarines. It carries the most modern anti-submarine weapons, including depth bombs and homing torpedoes.

The RCN's operational squadron, VS 880, which operates from HMCS Shearwater, and HMCS Bonaventure, is equipped with the CS2F-2 Tracker.

### *Vital Statistics*

Crew:	4 (2 pilots, 2 aircrewmen)
Endurance:	7.5 hours or 1000 miles.
Speed:	Search speed 140 knots. Maximum 224 knots.
All-up weight:	24,500 lbs.
Dimensions:	Span 69 feet 8 inches. Length 42 feet 3 inches.
Engines:	2 Wright 983C9HE1 nine cylinder air cooled radial, single speed supercharge.
Detection equipment:	Radar, sonobuoys, magnetic anomaly detector (MAD), explosive echo ranging, search-light, electronic counter measures (ECM) equipment.



## THE CHSS-2 "SEA KING"

(Helicopter)

The CHSS-2 prototype was built by the Sikorsky Aircraft Helicopter Division in Stratford, Connecticut and is now assembled in Canada by United Aircraft Limited, Longueuil, Quebec.

The Sea King, in addition to its vital all-weather, day-and-night features, possesses an automatic tail-folding device, winch-down equipment, hull-shaped fuselage, high speed and an automatic hovering capability. It is equipped with the most modern detection, navigation and weapons systems which enable the Sea King to search, locate and destroy any modern submarine.

Helicopters of HS 50 squadron operate from the aircraft carrier and from platform-equipped destroyer escorts.

### Vital Statistics

Crew:	4 (2 pilots, 2 aircrewmembers).
ASW Endurance:	4 hours or 500 miles.
Speed:	120 knots (cruising).
Gross Weight:	19,100 lbs. maximum.
Dimensions:	Fuselage Length—54'9" Width — 7'1" Height Over-all —16'8"
Engines:	2 General Electric T-58-GE-8B twin-turbines.
Detection Equipment:	Sonar-ranging set and self-contained navigation system.
Armament:	Homing torpedoes and depth bombs.

With the anti-submarine warfare equipment removed, the CHSS-2 can transport up to 25 troops internally or up to 4,000 pounds of stores externally.

### FOR FURTHER READING

**Navy Careers and Education.** A brochure outlining careers for officers and men in the RCN. Available from the nearest Naval Recruiting Officer or by writing to Careers, Naval Headquarters, Ottawa 4.

**Navy.** An information pamphlet outlining careers for men.

**Naval Occupational Monographs.** A series of monographs is available outlining the training and career employment of naval officers, naval seamen and Wrens.

**WHERE TO APPLY.** Young men who want to obtain more information or to make application for enrolment in the Royal Canadian Navy should visit, write, telephone, or wire the Naval Recruiting Office in one of the following cities:

Vancouver, B.C.	Fort William, Ont.	North Bay, Ont.
Victoria, B.C.	Windsor, Ont.	Montreal, P.Q.
Calgary, Alta.	London, Ont.	Quebec, P.Q.
Edmonton, Alta.	Hamilton, Ont.	Saint John, N.B.
Regina, Sask.	Toronto, Ont.	Charlottetown, P.E.I.
Saskatoon, Sask.	Kingston, Ont.	Halifax, N.S.
Winnipeg, Man.	Ottawa, Ont.	St. John's, Nfld.

The address of each recruiting office is listed in the relevant telephone directory.

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